

**Amendments to the Claims:**

The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1. (Currently Amended) A method of operating a packet switch which comprises a plurality of ingress means, a plurality of egress means, a cross-bar and a controller, the cross-bar being connected between the ingress means and the egress means to transfer multicast and unicast data traffic from the ingress means to the egress means, the method comprising the steps of:-

- a) determining if the data traffic to be transferred is unicast or multicast;
- b) if the data traffic is unicast, invoking a unicast schedule;
- c) if the traffic is multicast, invoking a multicast schedule; and
- d) transferring the data traffic in accordance with the invoked schedule; wherein,

step c) comprises forming a multicast cell fanout table containing current fanout requirements for a cell at the head of a multicast queue in each ingress means, setting eligible bits for multicast cells which are currently

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allowed to be scheduled, and determining a priority for each ingress means for sending the cells; and

the step of determining the priority for each ingress means is based on a comparison of a relative number of sets of adjacent combination of send opportunities of the ingress means, as well as size of said sets.

Claims 2-5. (Cancelled)

Claim 6. (Previously Presented) A method according to claim 1, further comprising the step of e) filling a blank multicast schedule in accordance with the priority assigned to each ingress means.

Claim 7. (Original) A method according to claim 6, wherein step e) comprises the step of:-

(i) filling the blank schedule with the full fanout of the first priority ingress means.

Claim 8. (Original) A method according to claim 7, wherein step e) further comprises the step of:-

(ii) filling in as much of the fanout of the next priority ingress means and subsequent ingress means as possible to complete the schedule.

Claim 9. (Currently Amended) A method ~~according to claim 8, wherein of~~ operating a packet switch which comprises a plurality of ingress means, a plurality of egress means, a cross-bar and a controller, the cross-bar being connected between the ingress means and the egress means to transfer multicast and unicast data traffic from the ingress means to the egress means, the method comprising the steps of:-

a) determining if the data traffic to be transferred is unicast or multicast;

b) if the data traffic is unicast, invoking a unicast schedule;

c) if the traffic is multicast, invoking a multicast schedule; and

d) transferring the data traffic in accordance with the invoked schedule; wherein,

step c) comprises forming a multicast cell fanout table containing current fanout requirements for a cell at the head of a multicast queue in each ingress means, setting eligible bits for multicast cells which are currently allowed to be scheduled, and determining a priority for each ingress means for sending the cells;

the step of determining the priority for each ingress means is based on a combination of send opportunities of the ingress means;

the method further comprises a step of e) filling a blank multicast schedule in accordance with the priority assigned to each ingress means;

step e) comprises (i) filling the blank schedule with the full fanout of the first priority ingress means, and (ii) filling in as much of the fanout of the next priority ingress means and subsequent ingress means as possible to complete the schedule; and

step (ii) comprises selecting fanouts of ingress means in accordance with multicast egress credit allocated to each egress means.

Claim 10. (Cancelled)

Claim 11. (Previously Presented) A method of operating a packet switch which comprises a plurality of ingress means, a plurality of egress means, a cross-bar and a controller, the cross-bar being connected between the ingress means and the egress means to transfer multicast and unicast data traffic from the ingress means to the egress means, the method comprising the steps of:-

- a) determining if the data traffic to be transferred is unicast or multicast;
- b) if the data traffic is unicast, invoking a unicast schedule;
- c) if the traffic is multicast, invoking a multicast schedule; and

d) transferring the data traffic in accordance with the invoked schedule; wherein,

step c) comprises forming a multicast cell fanout table containing current fanout requirements for a cell at the head of a multicast queue in each ingress means, and setting eligible bits for multicast cells which are currently allowed to be scheduled;

each ingress means has a rate associated with multicast traffic, said rate being represented as a send opportunity every fixed number of cell periods, the send opportunities of the plurality of ingress means being combined into a multicast schedule by placing a send opportunity on the next free cell cycle unless it would overlap with the next send opportunity for the same ingress means; and in the case of a potential such overlap, stacking multiple send opportunities in a single cell cycle; and

a priority is determined for each ingress means associated with the stacked send priorities, based on the combination of send opportunities in the multicast schedule.

Claim 12. (New) A method according to claim 11, further comprising the step of e) filling a blank multicast schedule in accordance with the priority assigned to each ingress means.

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Claim 13. (New) A method according to claim 12, wherein step e)  
comprises the step of:-

(i) filling the blank schedule with the full fanout of the first  
priority ingress means.

Claim 14. (New) A method according to claim 13, wherein step e) further  
comprises the step of:-

(ii) filling in as much of the fanout of the next priority ingress  
means and subsequent ingress means as possible to complete the schedule.

Claim 15. (New) A method according to claim 14, wherein step (ii)  
comprises selecting fanouts of ingress means in accordance with multicast egress  
credit allocated to each egress means.